

1 18. (Amended) An electrical structure, comprising:

2 a chromium volume, wherein said chromium volume is operationally positioned in a

3 conveyorized processing apparatus, said apparatus further including a spray applicator for

4 dispensing an acid solution;

5 an iron-comprising body in continuous electrical contact with the chromium volume; and

6 said acid solution in continuous contact with both the chromium volume and the iron-

7 comprising body, wherein the chromium volume is being etched at an etch rate by said acid

8 solution.

1 19. (Amended) The electrical structure of claim 18, wherein the electrical structure further

2 comprises a chromium oxide layer on the chromium volume.

1 20. The electrical structure of claim 18, wherein the acid solution includes hydrochloric acid

2 in a liquid bath form.

1 21. The electrical structure of claim 18, wherein the acid solution includes hydrochloric acid

2 in a spray form.

1 22. The electrical structure of claim 18, wherein said iron-comprising body includes steel.

1 23. The electrical structure of claim 18, further comprising a layer of conductive metal,

2 wherein the chromium volume includes a layer of chromium, and wherein the layer of chromium

3 is on the layer of conductive metal.

1 24. (Amended) The electrical structure of claim 23, wherein the acid solution is not in
2 contact with the layer of conductive metal.

1 25. The electrical structure of claim 24, wherein the iron-comprising body includes steel,
2 wherein the acid solution includes hydrochloric acid, and wherein the layer of conductive metal
3 includes a metal selected from the group consisting of copper, aluminum, nickel, silver, and gold.

1 26. (Twice Amended) An electrical structure, comprising:

2 a chromium volume, wherein said chromium volume is operationally positioned in a
3 conveyorized processing apparatus, said apparatus further including a spray applicator for
4 dispensing an acid solution;

5 an iron-comprising body in continuous electrical contact with the chromium volume; and
6 said acid solution in continuous contact with both the chromium volume and the iron-
7 comprising body, wherein the chromium volume is being etched at an etch rate by said acid
8 solution; and

9 a layer of conductive metal, wherein the chromium volume includes a layer of chromium,
10 wherein the layer of conductive metal is on the layer of chromium, wherein the conductive metal
11 includes an opening extending through its thickness, wherein the opening exposes the layer of
12 chromium, wherein the iron-comprising body is in continuous electrical contact with the
13 chromium volume, and wherein the acid solution is in contact with both the iron-comprising

14 body and the chromium volume within the opening.

1 27. The electrical structure of claim 26, wherein the iron-comprising body includes steel,
2 wherein the acid solution includes hydrochloric acid, and wherein the layer of conductive metal
3 includes a metal selected from the group consisting of copper, aluminum, nickel, silver, and gold.

1 28. The electrical structure of claim 18, wherein the iron-comprising body includes steel,
2 wherein the chromium volume includes metallic chromium, wherein the acid solution includes
3 hydrochloric acid, wherein a temperature (T) and a molarity (M) of the hydrochloric acid is
4 within a triangular space defined by (T,M) points of (21 °C, 2.4 M), (52 °C, 2.4 M), and (52 °C,
5 1.2 M), and wherein the etch rate is at least a factor of about 2 greater than an etch rate that
6 would occur in an absence of the iron-comprising body.

1 29. The electrical structure of claim 18, wherein the iron-comprising body includes steel,
2 wherein the chromium volume includes metallic chromium, wherein the acid solution includes
3 hydrochloric acid, wherein a temperature (T) and a molarity (M) of the hydrochloric acid is
4 within a triangular space defined by (T,M) points of (21 °C, 2.4 M), (52 °C, 2.4 M), and (52 °C,
5 1.2 M), and wherein the etch rate is at least about 5 Å/second.

1 30. The electrical structure of claim 18, further comprising a flouropolymer dielectric volume
2 bonded to said chromium volume.

1 31. (New) An electrical structure, comprising:
2 a chromium volume;
3 an iron-comprising body in continuous electrical contact with the chromium volume,
4 wherein the iron comprising body includes steel; and
5 an acid solution in continuous contact with both the chromium volume and the iron-
6 comprising body, wherein the chromium volume is being etched at an etch rate.

1 32. (New) The electrical structure of claim 31, wherein the electrical structure further
2 comprises a chromium oxide layer on the chromium volume.

1 33. (New) The electrical structure of claim 31, further comprising a layer of conductive
2 metal, wherein the chromium volume includes a layer of chromium, and wherein the layer of
3 chromium is on the layer of conductive metal.

1 34. (New) The electrical structure of claim 33, wherein the acid solution is not in contact with
2 the layer of conductive metal.

1 35. (New) The electrical structure of claim 34, wherein the acid solution includes
2 hydrochloric acid, and wherein the layer of conductive metal includes a metal selected from the
3 group consisting of copper, aluminum, nickel, silver, and gold.

1 36. (New) The electrical structure of claim 31, wherein the chromium volume includes
2 metallic chromium, wherein the acid solution includes hydrochloric acid, wherein a temperature
3 (T) and a molarity (M) of the hydrochloric acid is within a triangular space defined by (T,M)
4 points of (21 °C, 2.4 M), (52 °C, 2.4 M), and (52 °C, 1.2 M), and wherein the etch rate is at least
5 about 5 Å/second.

1 37. (New) The electrical structure of claim 31, further comprising a flouopolymer dielectric
2 volume bonded to said chromium volume.